FINAL SITE INSPECTION REPORT
FOR
COMERFORD MFG. CO.
BRISTOL, CONNECTICUT

CERCLIS No. CTD983970627
TDD No. 9304-08-AWS
Work Assignment No. 09-1JZZ

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WESTON/ARCS
Reviewed and Approved:

10 APR 1995
Task Manager Date

4/10/95
Site Manager Date

4-11-95
QA Review Date

Work Order No. 04100-009-092-0007

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Final Site Inspection Report
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INTRODUCTION

The Roy F. Weston, Inc. Alternative Remedial Contract Strategy (WESTON/ARCS) team was requested by the Region I U.S. Environmental Protection Agency (EPA) Waste Management Division to perform a Site Inspection of the Comerford Mfg. Co. facility in Bristol, Connecticut. Tasks were conducted in accordance with the ARCS contract, the Site Inspection scope of work, and technical specifications provided by the EPA under Work Assignment No. 09-1JZZ, which was issued to WESTON/ARCS on March 26, 1991. A Preliminary Assessment (PA) of the property was prepared by the Connecticut Department of Environmental Protection (CT DEP), Hazardous Materials Management Unit on October 19, 1989. The PA provided a description of the property and summarized previous environmental work conducted on-site. According to the report, between 1960 and 1972, Comerford Mfg. Co. operations on-site included metal fabrication and plating [1, p. 1].

Background information used in the generation of this report was obtained through file searches conducted at the CT DEP, telephone interviews with town officials, conversations with persons knowledgeable of the Comerford Mfg. Co. property and conversations with other Federal, State, and local agencies. Additional information was collected during the WESTON/ARCS on-site reconnaissance on October 21, 1994. Environmental samples were not collected during the Site Inspection.

This package follows the guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, commonly referred to as Superfund. However, these documents do not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other Federal, State, or local regulations. Site Inspections are intended to provide a preliminary screening of sites to facilitate EPA's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

SITE DESCRIPTION

The Comerford Mfg. Co. property is located at 319 Lake Avenue on the corner of Vincent Kelly Road in Bristol, Connecticut at geographic coordinates 41° 39′ 26.0″ north latitude and 72° 55′ 21.3″ west longitude (Figure 1) [1, p. 2; 2]. The property is bounded by Vincent Kelly Road to the north, Lake Avenue to the west, Jewels by Stanlee to the south, and PA-Ted Spring Company to the east [3, pp. 10, 11]. The Comerford Mfg. Co. property is zoned for industrial use as is the land to the north, east, and south; to the west land is zoned for neighborhood business use and to the northwest the land is zoned for single-family residential use [1, pp. 3, 4]. Presently, the property is occupied by Enflo Corporation, which manufactures teflon products [1, p. 3; 3, p. 2].

(b) (9)

BASE MAP IS A PORTION OF THE FOLLOWING 7.5' U.S.G.S. QUADRANGLE(S):
BRISTOL, CONNECTICUT 1966, PHOTOREVISED 1984

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

QUADRANGLE LOCATION: BRISTOL, CONNECTICUT

LOCATION MAP

COMERFORD MFG. CO.

BRISTOL, CONNECTICUT

WESTON MANAGERS DESIGNERS/CONSULTANTS

FIGURE 1

The Comerford Mfg. Co. property is identified by the Bristol Assessor's Office as Lots 1, 2, and 3, totaling approximately six acres [4]. The one-story building is located on Lot 1; Lots 2 and 3 are mostly wooded [1, p. 3; 3, p. 8; 4]. The building has 22,479 square feet (sq ft) of manufacturing area with concrete slab floors and 3,162 sq ft of office space at the west end of the building. The southeast corner of the building has a 7 x 25-foot loading dock and the east and south sides of Lot 1 are paved around the building for parking (Figure 2) [1, p. 3; 3, p. 5]. A 2,000-gallon fiberglass underground storage tank (UST) is located west of the building under the lawn, which is used to store fuel oil. An unknown UST was identified near the southeast corner of the building by the presence of fill and vent pipes. The volume and contents of the tank could not be determined. According to Enflo Corporation personnel, the tank has not been used since at least 1976 [3, pp. 5, 6].

During the WESTON/ARCS on-site reconnaissance several potential source areas on the property were identified. A cesspool, located approximately 20 feet north of the southeast corner of the building, receives wastewater generated during manufacturing processes. Three areas of discolored and hardened soil, possibly due to surface dumping of wastes, are located in the woods south of the southern parking lot. The reddish-brown to silvery-grey soil covered a total area of approximately 200 sq ft [3, pp. 6-8]. A hazardous materials storage area, containing nine 55-gallon drums, is located in the southwest portion of the building. Four of the drums contain virgin hydraulic oil and virgin tetrachloroethylene. In addition to the four full drums, five additional drums (empty/partially full of waste hydraulic oil) are also stored at this location. This storage area is located inside the building on a concrete slab with primary containment provided by the 55-gallon drums [3, pp. 4, 5].

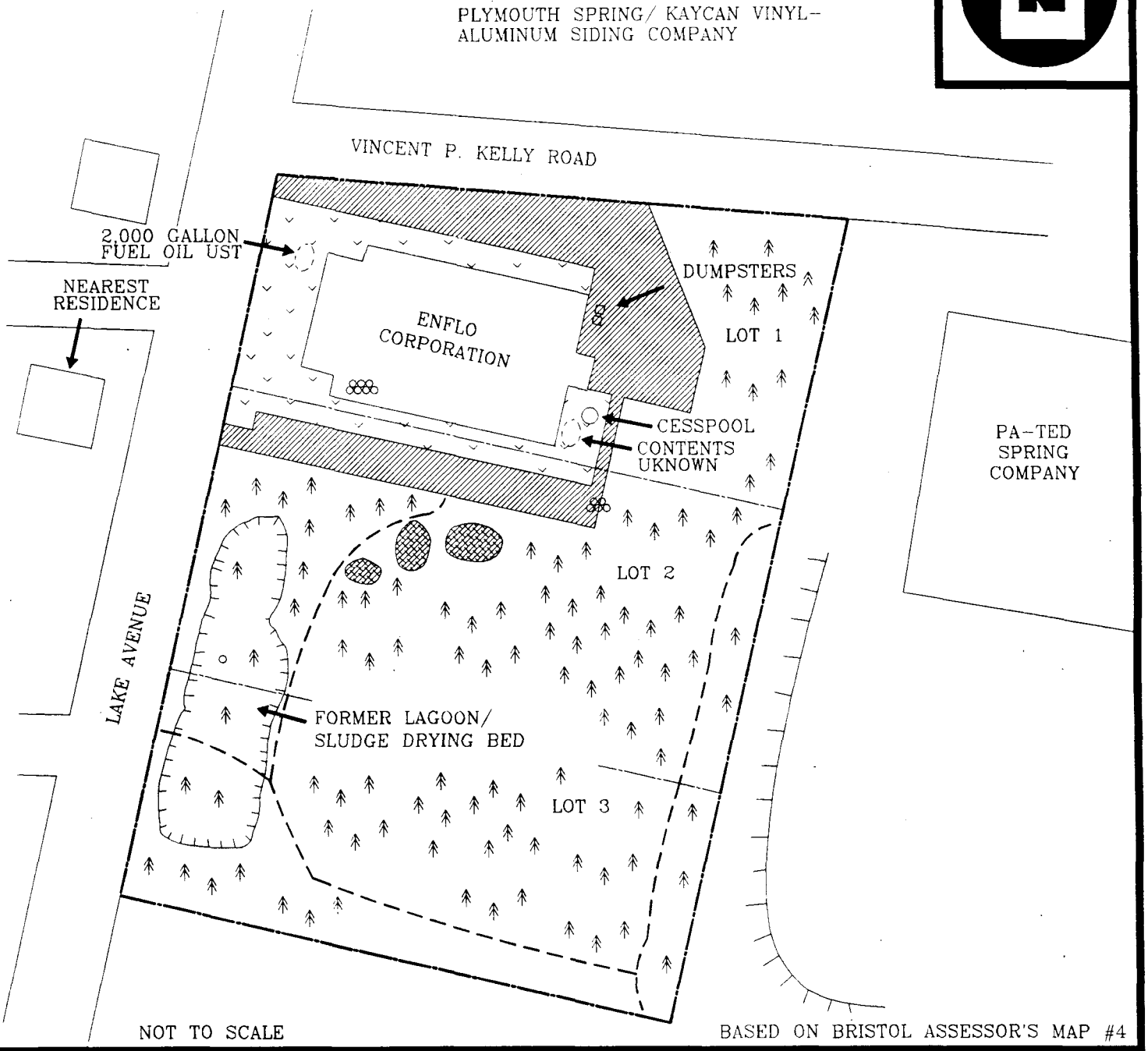
During WESTON/ARCS on-site reconnaissance, a broad, shallow depression was noted in the woods south of the building, covering the western sides of Lots 2 and 3. It is suspected that the depression may be a former lagoon or sludge drying bed, as the area was used for sewage disposal prior to 1960 when the property was owned by the City of Bristol [5; 6].

The nearest residence to the property is located approximately 250 feet west of the property at 316 Lake Avenue [3, p. 3]. The nearest public water source to the property is located at Briarwood College, approximately (b) (9) of the property. The nearest private drinking water wells are located approximately (b) (9) of the property, at (b) (9) [3, pp. 11, 12; 4].

Surface water runoff from the sources on the property flows south to southeasterly to an unnamed wetland and pond located approximately 0.34 miles southeast of the property by direct overland flow [3, pp. 8, 13].

OPERATIONAL AND REGULATORY HISTORY AND WASTE CHARACTERISTICS

Prior to 1960, the property was owned by the City of Bristol. The entire area from Lake Avenue to Middle Street and between Battisto Road and Cross Street was used as sludge drying beds for the City of Bristol sewage treatment plant; in addition, street sweepings may have been disposed of on the property [1, pp. 7, 8; 5; 6]. Comerford Realty Company bought the six-acre lot from



LEGEND

- PAVED AREA
- CONTAMINATED SOIL
- GRASS
- TREES
- PROPERTY LINE
- PATH
- SLOPE, TICKS ON DOWNHILL SIDE
- DRUMS
- UNDERGROUND STORAGE TANK

SITE SKETCH

COMERFORD MFG. CO.

BRISTOL, CONNECTICUT

WESTON MANAGERS DESIGNERS/CONSULTANTS

FIGURE 2

the City of Bristol via a Quit Claim on December 22, 1959. Comerford Mfg. Co. began operations on the property in 1960 and occupied the property until 1972, producing springs and metal stampings. Between 1972 and 1977 it is reported that Acme Rivet & Machine Corporation (Acme Rivet) operated on-site; no information regarding the operations at Acme Rivet was found in available files [1, p. 3].

Manufacturing processes at the Comerford Mfg. Co. included metal fabrication and plating, producing waste containing nickel, tin, chromium, copper, cadmium, zinc, and cyanide [1, pp. 2, 3, 8; 5; 6]. The industrial wastewaters were discharged into an on-site cesspool which measures 18 feet in diameter and 10 feet deep, which is located near the southeastern corner of the building [1, pp. 2, 3; 3, pp. 5, 6, 8]. The volume of industrial wastewater that was discharged into the cesspool was calculated to be 2,117 gallons per day; this value was obtained by estimating the amount of water used by the employees for sanitary purposes and subtracting this value from the volume of city water metered for the building [2, pp. 3, 8; 5].

Acme Rivet, located in Bristol, Connecticut, was a manufacturer of rivets; processes used at facilities elsewhere in Bristol included metal fabricating and plating [38]. No available information documents what processes were used at the 319 Lake Avenue location while Acme Rivet occupied it from 1972 until 1976. The other Acme Rivet facilities in Bristol closed between 1989 and 1992 [38].

Enflo Corporation began operations on-site in 1976 [3, p. 2]. The manufacturing processes involved in the production of teflon products includes compression molding, machining, cutting, and parts washing both by hand and machine [1, p. 3; 3, p. 2]. Chemicals used for washing the teflon parts include tetrachloroethylene and 1,1,1-trichloroethane; approximately 27.5 gallons of solvents are used annually. Machines used at the facility generate waste hydraulic oils at a quantity estimated at 27.5 gallons a year. The solvents and oils are stored in 55-gallon drums within the building at the southwest end of the manufacturing plant [3, pp. 2, 5]. Wash waters, containing detergents, are disposed of to the on-site cesspool. Enflo Corporation employs one part-time and four full-time workers involved in the manufacturing processes, and ten office workers [3, p. 2].

Table 1 presents identified structures or areas on the Comerford Mfg. Co. property that are potential sources of contamination, the containment factors associated with each source, and the relative location of each source. Table 2 summarizes the types of potentially hazardous substances which have been disposed, used, or stored on the property.

Both Comerford Mfg. Co. and Acme Rivet closed prior to the enactment of RCRA in 1980; therefore, neither company had any RCRA status. Other Acme Rivet facilities located in Bristol subsequently became RCRA notifiers [36]. Enflo Corporation has never had any RCRA status [36]. There are 15 CERCLA sites located in Bristol, and 78 RCRA notifiers located in Bristol [35; 36].

On July 14, 1982, CT DEP personnel inspected the Comerford Mfg. Co. Inc. property at 319 Lake Avenue. CT DEP noted two suspected places where wastes generated by the processes at the facility were disposed of on the property. One disposal area is the on-site cesspool; which, according to CT DEP calculations, may have received 2,117 gallons per day of process

Table 1

Source Evaluation for Comerford Mfg. Co.

Potential Source Area	Containment Factors	Spatial Location
Cesspool	No containment to groundwater pathway; designed to treat sanitary waste and release to groundwater. Source is below ground which provides protection to surface water, surface soil, and air.	Located approximately 20 feet north off of the southeast corner of building.
Contaminated Soil	None.	Located just south of the southern parking lot.
Hazardous Material Storage Area	Source area is inside maintained intact structure that provides protection from precipitation so that neither runoff or leachate is generated.	Stored indoors, at the southwest corner of the building.
Fuel Oil UST	No secondary containment to groundwater; no liner or monitoring wells present. Source is below ground which provides containment to surface water, surface soil, and air.	Located west of the building under the lawn.
UST (contents unknown)	Unknown containment to groundwater pathway, no liner or monitoring wells present. Source is below ground which provides containment to surface water, surface soil, and air.	Located near the southeast corner of the building.

UST = Underground storage tank.
[3, pp. 2-8]

Table 2

Hazardous Waste Quantity for Comerford Mfg. Co.

Substance	Quantity or Volume/Area	Years of Use/Storage	Years of Disposal	Source Area
Plating Wastes	2,117 gpd	1960 to 1972	1960 to 1972	Cesspool
Contaminated Soil	200 square feet	At least 1982 to present	At least 1982 to present	Contaminated soil
Tetrachloroethylene	< 27.5 gal/yr	1976 to present	1976 to present	Hazardous materials storage area
1,1,1-Trichloroethane	< 27.5 gal/yr	1976 to present	1976 to present	Hazardous materials storage area
Hydraulic Oils	< 55 gal/yr	1976 to present	1976 to present	Hazardous materials storage area

gal/yr = Gallons per year.
gpd = Gallons per day.
[1, p. 3; 3, p. 2; 5]

wastewater [5]. The wastewater reportedly contained the following inorganic elements: nickel, tin, chromium, copper, cadmium, zinc, and cyanide. The second area is an area of discolored soil located south of the southern parking lot. CT DEP personnel noted that there was no vegetation in the area, and described the area as "oily-looking" and "oil-like blackish surface" [5]. According to the CT DEP inspection report, a soil sample was collected from the area of discolored soil, and an additional note suggests that soil samples may have been collected from "six random points" subsequently [5]. No record of the results of the soil sampling was found in available files. Based on the location maps included in the CT DEP inspection report, the area of discolored soil is in the same location as the discolored and hardened soil noted during the WESTON/ARCS on-site reconnaissance [3, p. 8; 5].

GROUNDWATER PATHWAY

Soil maps for Hartford County note the Comerford Mfg. Co. property as Sewage Disposal; no data regarding native soils is available; the former use of the property as sewage treatment plant sludge drying beds indicates that the surface is highly permeable [5; 6]. Average rainfall for the Town of Bristol is 49.06 inches per year [7].

The surficial geology of the area beneath the Comerford Mfg. Co. property has been mapped as glacial meltwater deposits. These deposits are associated with deltaic deposits comprised of stratified sand and gravel overlying sand. The sand and gravel deposits are horizontally bedded and generally less than 20 feet thick; they overlie thicker, inclined layers of sand. The sand and gravel deposits indicate that the permeability at the site is moderate to high [1, p. 6; 8].

The bedrock geology of the property has been mapped as the Triassic New Haven Arkose, which makes up a large part of the Central Lowlands of Connecticut. The New Haven Arkose is a reddish, poorly-sorted sandstone and conglomerate. Located approximately 0.25 miles west of the property is a north-south trending fault that separates the New Haven Arkose from the Paleozoic Straits Schist. The Straits Schist is described as a gray to silvery, medium-grained metamorphic rock [1, p. 6; 9].

Typical hydraulic conductivities for sand and gravel range from 10^{-4} to 10^{-2} centimeters per second (cm/s) and typical hydraulic conductivities for fractured sedimentary rock are approximately 10^{-4} cm/s [37, p. 51601]. For the purposes of this report, no continuous, low-permeability layer separates overburden and bedrock beneath the property and one continuous overburden/bedrock aquifer may be presumed to exist beneath the property [37, p. 51601]. No bedrock formation mapped within four radial miles of the property exhibits karst characteristics [9].

The property slopes gradually to the southeast [10]. The groundwater flow direction has not been defined but is presumed be southeastward [2, p. 6; 3, p. 10].

All or part of the following Connecticut cities and towns are located within four radial miles of the Comerford Mfg. Co. property: Bristol (population 60,640), Southington (population 38,000), Plainville (population 17,392), Farmington (population 20,608), Wolcott (population 13,500), and Plymouth (population 11,700) [10; 11; 12; 13; 14]. The Lake Avenue area is served by public

water and sewer; however, there are several homes which still maintain private drinking water wells located approximately [redacted] of the property, at [redacted] [3, pp. 11, 12; 4].

The Bristol Water Department (BWD) provides drinking water to 60,000 persons, including residents of Bristol, with water obtained from wells located within four radial miles of the property [16; 26]. BWD Well No. 2, an overburden well, is located [redacted] of the property and contributes one-third of the water supply, serving an estimated 20,000 individuals [16; 17; 18; 26]. BWD Well No. 1 is a bedrock well located [redacted] of the property. Well No. 1 contributes one-third of the water supply, serving an estimated 20,000 persons. The BWD Mix Street Wells, are three overburden wells located [redacted] of the property, respectively [16; 26]. The BWD Mix Street Wells contribute one-third of the water supply to the system, serving an estimated 6,666 persons each [16; 17; 18; 26].

Another public water supply, the New Britain Water Department (NBWD), utilizes two groundwater sources, the White Bridge Wells, which are located in Bristol. Both of the overburden wells are located [redacted] of the property [16; 26]. The NBWD system has a total seven sources, with each source contributing equally to the system; the other five sources are located more than four radial miles from the property [16; 26]. Each of the White Bridge Wells contributes approximately 14.2 percent of the annual total supply, which serves an estimated 90,600 persons; each well served an estimated 12,865 persons [15; 19; 26]. The remainder of the population of Bristol relies on private wells [15; 19].

Three community water supplies are located in Southington which are within four radial miles of the Comerford Mfg. Co. property. Briarwood College operates a bedrock well located [redacted] of the property which serves an estimated 450 students and faculty [16; 23]. Forest Hills Mobile Home Park is served by a well located [redacted] of the property; the system serves an estimated 380 individuals [17; 26]. Apple Valley Village maintains a well located [redacted] of the property which serves an estimated 70 individuals [17; 21; 26]. The remainder of the Plainville population relies on private wells [15].

Three public water supplies serve parts of Plainville. The Plainville Water Department supply, obtained from two overburden well fields, serves an estimated 20,000 individuals [16; 17]. The Woodford Avenue Wells, an overburden, three-well field is located [redacted] of the property, contributes 60 percent of the total supply, and serve an estimated an estimated 12,000 individuals [16; 17; 24; 26]. The Johnson Avenue Wells, an overburden, two-well field, is located [redacted] of the property and supplies the remaining 40 percent of the water to the system, serving an estimated 8,000 individuals [16; 17; 24; 26]. The remainder of the Plainville population relies on private wells [15].

Cope Manor is located [redacted] of the property and maintains one bedrock well that serves an estimated 92 individuals [16; 25]. Ciccio Court also maintains a pair of wells located [redacted] of the property, serving an estimated 80 persons [16; 20].

The Unionville Water Company (Unionville) provides drinking water to approximately 12,700 residents of Farmington [40]. The Unionville system consists of 12 wells at five locations in Farmington [40]. Of these 12 wells, five are located within four miles of the

Comerford Mfg. Co. property [16; 26]. The Industrial Park well field, an overburden, four-well field, is located (b) (9) of the property and serves 1,615 persons [16, p. 35; 26; 40; 41]. The Wells Acres Well, a bedrock well, is located (b) (9) of the property and serves 508 persons [16, p. 35; 26; 40; 41].

The portions of Wolcott and Plymouth located within four radial miles of the property have no public water supply wells. These areas rely on public water obtained from sources more than four miles from the property or on private wells [15; 16; 26].

Due to the distance to the nearest public and private groundwater targets, it is unlikely that a threat to groundwater supplies exists. WESTON/ARCS did not collect groundwater samples as part of this Site Inspection.

Table 3 is used to summarize the public groundwater supply sources within four radial miles of the Comerford Mfg. Co. property. Table 4 is used to summarize the estimated drinking water populations served by groundwater sources within four radial miles of the Comerford Mfg. Co. property.

Table 3

Public Groundwater Supply Sources Within Four Miles of Comerford Mfg. Co.

Distance/ Direction from Site	Source Name	Location of Source[a]	Estimated Population Served	Source Type[b]
(b) (9)	Briarwood College Well	Southington	450	Unknown
	Bristol Water Department Well No. 2	Bristol	20,000	Unknown
	Forest Hills Mobile Home Park	Southington	380	Unknown
	Cope Manor	Plainville	92	1 Bedrock Well
	Bristol Water Department Mix Street Wells	Bristol	20,000	Unknown
	Apple Valley Village	Southington	70	Unknown
	Ciccio Court	Plainville	80	Unknown
	White Bridge Wells	Bristol	12,865	1 Overburden Well
	White Bridge Wells	Bristol	12,865	1 Overburden Well
	Bristol Water Department Well No. 1	Bristol	20,000	Unknown
	Plainville Water Company Woodford Avenue Wells	Plainville	3,600	4 Overburden Wells

Table 3

Public Groundwater Supply Sources Within Four Miles of Comerford Mfg. Co.
(concluded)

Distance/ Direction from Site	Source Name	Location of Source[a]	Estimated Population Served	Source Type[b]
(b) (9)	Unionville Water Company Industrial Park Wells	Farmington	1,615	4 Overburden Wells
	Unionville Water Company Wells Acres Well	Farmington	508	1 Bedrock Wells
	Plainville Water Company Johnson Avenue Wells	Plainville/ Farmington	6,700	2 Overburden Wells

[a]Indicate Town in which well is located.
[b]Overburden, Bedrock, or Unknown.
[16; 18; 19; 20; 21; 22; 23; 24; 25; 26]

Table 4

Estimated Drinking Water Populations Served by Groundwater Sources Within Four Miles of Comerford Mfg. Co.

Radial Distance From Comerford Mfg. Co. (miles)	Estimated Population Served by Private Wells	Estimated Population Served by Public Wells	Total Estimated Population Served by Groundwater Sources Within the Ring
0.00 < 0.25	0	0	0
0.25 < 0.50	85	0	85
0.50 < 1.00	234	0	234
1.00 < 2.00	1,155	20,450	21,605
2.00 < 3.00	3,092	46,352	49,444
3.00 < 4.00	4,943	32,423	37,366
TOTAL	**9,509**	**99,225**	**108,734**

[15; 16; 18; 19; 20; 21; 22; 23; 24; 25; 26]

SURFACE WATER PATHWAY

The property is located in the Quinnipiac River drainage basin, south of the drainage basin divide between the Farmington River and Quinnipiac River drainage basins [16, p. 52]. Surface water runoff from the sources on the property flows overland south to southeasterly to a wetland located approximately 0.34 miles southeast from the property. The wetland drains to a pond which is the headwaters of an unnamed stream, which discharges to the Eight Mile River southeast of the property [3, p. 13; 10]. The end of the 15-mile downstream surface water drainage route is on the Quinnipiac River, in South Meriden, Connecticut (Figure 3) [1, p. 3, 6, 7; 3, p. 13; 10; 27; 28; 29; 30]. The Comerford Mfg. Co. property is located above the 500-year flood elevation [3, p. 10].

Table 5 summarizes data regarding water bodies located within 15 downstream miles of the property.

Table 5

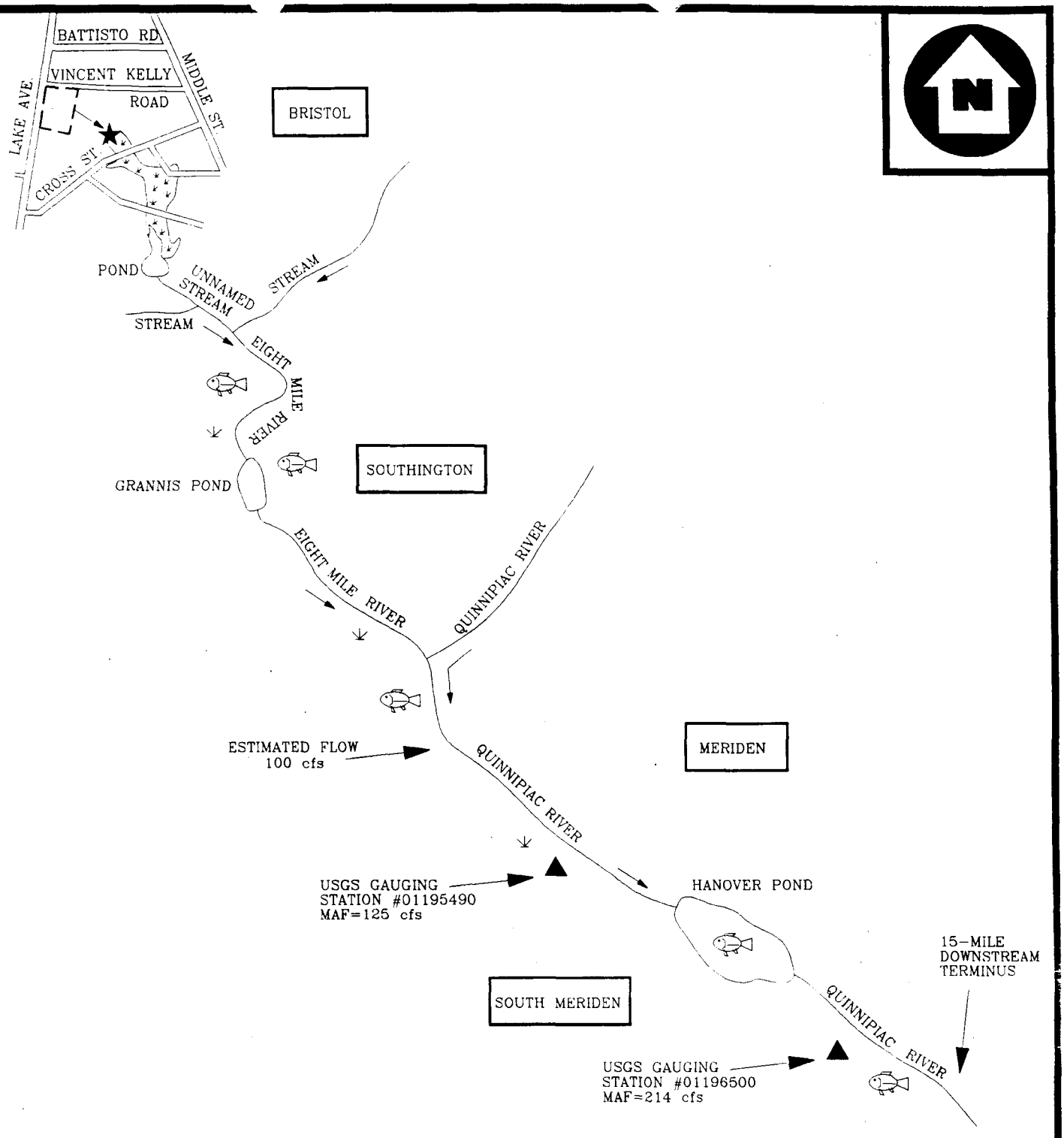
Water Bodies Within the Surface Water Segment of Comerford Mfg. Co.

Surface Water Body	Descriptor*	Length of Reach	Flow Characteristics	Length of Wetlands
Wetland/Unnamed Pond	Minimal stream	0.38 miles	< 10 cfs	1.00 miles
Unnamed Stream/Eight Mile River	Small to moderate stream	1.90 miles	10 to 100 cfs	2.50 miles
Grannis Pond	Minimal stream	0.72 miles	10 to 100 cfs	0.50 miles
Eight Mile River/Quinnipiac River	Small to moderate stream	9.52 miles	10 to 100 cfs	5.19 miles
Hanover Pond	Minimal stream	0.86 miles	100 to 1,000 cfs	0.25 miles
Quinnipiac River	Moderate to large stream	1.62 miles	100 to 1,000 cfs	0.67 miles

* Minimal stream. Small to moderate steam. Moderate to large stream. Large stream to river. Very large river. Coastal tidal waters. Shallow ocean zone or Great Lake. Deep ocean zone or Great Lake. Three-mile mixing zone in quiet flowing river.

cfs = Cubic feet per second.

[1, pp. 7, 14; 3, p. 13; 10; 27; 28; 29; 30; 31; 32]



NOT TO SCALE

BASED ON A WALL-MOUNTED MAP IN THE CITY ENGINEER'S OFFICE IN BRISTOL, CT

LEGEND

★ PPE TO SURFACE WATER

FISHERY

WETLANDS

FLOW DIRECTION

PROPERTY BOUNDARY

SURFACE WATER MIGRATION ROUTE

COMERFORD MFG. CO.
BRISTOL, CONNECTICUT

WESTON MANAGERS DESIGNERS/CONSULTANTS

FIGURE 3

The Eight Mile and Quinnipiac rivers are classified as C/B along their length within 15 downstream miles of the property. Class C/B is used to describe fresh water resources with known water quality problems. These waters can have existing uses that include recreational activities, fish and wildlife habitat, agricultural and industrial supply and other legitimate uses, including navigation. No drinking water intakes are identified within 15 downstream miles of the property [1, pp. 8, 14; 3, p. 1; 16, pp. 52, 65-67; 33].

The Quinnipiac River and intermittent segments of the Eight Mile River are considered major trout streams by CT DEP, Division of Inland Fisheries. The Eight Mile River is stocked with trout between Grannis Pond and Prospect Street in Southington, Connecticut. It is likely that stocked and native trout are also fished for in the tributary streams to the Eight Mile River [39]. An estimated 10.11 miles of wetland frontage occur within 15 downstream miles of the property [27; 28; 29; 30; 31]. Available information does not document the occurrence of other sensitive environments within 15 downstream miles of the property [34].

No surface water or sediment samples have been collected on or downstream of the property [3, p. 2]. Based on the overland distance to a permanent surface water body, the historical use of the property, the proximity of other potential sources of contamination, and data available regarding substances used and disposed of on the property; WESTON/ARCS did not collect surface water or sediment samples as part of the Site Inspection.

SOIL EXPOSURE PATHWAY

Soil maps for Hartford County note the Comerford Mfg. Co. property as Sewage Disposal; no data regarding native soils is available; the entire industrial area from Lake Avenue to Middle Street and between Batista Road and Cross Street was used for sludge drying beds for the sewage treatment plant prior to 1960 [5; 6].

The Comerford Mfg. Co. property is presently owned by Enflo Corporation, which is involved in the manufacturing of teflon products. This is an active facility with one part-time and four full-time workers involved in the manufacturing process and ten office workers. The nearest residence to the property is located approximately 250 feet west of the property at 316 Lake Avenue. There are no schools or day-care facilities located within 200 feet of any area of observed contamination on the property. An estimated 5,843 people live within one radial mile of the property. There are no terrestrial sensitive environments located on the property [1, pp. 2, 3; 3, pp. 2, 8; 4; 15].

Based on the availability of data regarding the nature of hazardous materials disposed of at the property, WESTON/ARCS did not collect soil samples as part of the Site Inspection.

AIR PATHWAY

An estimated 85,888 people live within four radial miles of the property and 15 people are known to work on-site [2, pp. 2, 3; 3, pp. 2, 8; 15].

Table 6 summarizes the population located within four radial miles of the property.

Table 6

Estimated Population Within Four Miles of Comerford Mfg. Co.

Radial Distance From Comerford Mfg. Co. (miles)	Estimated Population
On-site	15
0.00 < 0.25	286
0.25 < 0.50	876
0.50 < 1.00	4,681
1.00 < 2.00	22,320
2.00 < 3.00	27,080
3.00 < 4.00	30,645
TOTAL	**85,903**

[3, p. 2; 15]

Several sensitive environments are located within four radial miles of the property [34]. Table 7 summarizes the sensitive environments located within four miles of the Comerford Mfg. Co. property. Approximately 1,045 acres of wetlands occur within four radial miles of the property [27; 28; 29; 30; 31].

Table 7

Sensitive Environments Within Four Miles of Comerford Mfg. Co.

Radial Distance from Comerford Mfg. Co. Area (miles)	Sensitive Environment/Species (status)
0.00 < 0.25	5 acres of wetlands
0.25 < 0.50	5 acres of wetlands
0.50 < 1.00	40 acres of wetlands
1.00 < 2.00	155 acres of wetlands
	Eumeces fasciatus (State threatened)
	Triphora trianthophora (State special concern)
2.00 < 3.00	360 acres of wetlands
	Arethusa bulbosa (State endangered)

Table 7

Sensitive Environments Within Four Miles of Comerford Mfg. Co.
(concluded)

Radial Distance from Comerford Mfg. Co. Area (miles)	Sensitive Environment/Species (status)
3.00 < 4.00	480 acres of wetlands
	Hydrastis canadensis (State endangered)
	Dicentra canadensis (former category)
	Platanthera dilatata (State threatened)
	Polygala nuttallii (State special concern)
	Lygodium palmatum (State special concern)
	Gaylussacia dumosa var bigeloviana (State threatened)
	Epilobium palustre (status undetermined)

[34]

No previous air sampling has been performed at the property. During the WESTON/ARCS on-site reconnaissance, continuous air monitoring was performed using a photoionization detector which monitors organic vapors. No readings above background levels were recorded [3, p. 2, 10].

SUMMARY

The Comerford Mfg. Co. property is presently owned by Enflo Corporation and is an active facility located at 319 Lake Avenue in Bristol, Connecticut. The Comerford Mfg. Co. property is zoned for industrial use as is the land to the north, east, and south; to the west land is zoned for neighborhood business use and to the west and northwest the land is zoned for single-family residential use.

Prior to 1960, the property was owned by the City of Bristol. The entire area from Lake Avenue to Middle Street and between Batista Road and Cross Street was used for sludge drying beds for the City of Bristol sewage treatment plant; in addition, street sweepings may have been disposed of on the property. Comerford Realty Company bought the six- acre lot from the City of Bristol via a Quit Claim on December 22, 1959. Comerford Mfg. Co. began operations on the property in 1960 and occupied the property until 1972, producing springs and metal stampings. Comerford Mfg. Co. manufacturing processes included metal fabrication and plating, producing waste containing nickel, tin, chromium, copper, cadmium, zinc, and cyanide. The industrial wastewaters were discharged into an on-site cesspool which measures 18 feet in diameter and 10 feet deep, which is located near the southeastern corner of the building. The volume of

industrial wastewater that was discharged into the cesspool was calculated to be 2,117 gallons per day; this value was obtained by estimating the amount of water used by the employees for sanitary purposes and subtracting this value from the volume of city water metered for the building.

Between 1972 and 1977 it is reported that Acme Rivet operated on-site; no information documenting the operations at Acme Rivet was found in available files. The company may have produced rivets on the property, also using metal fabrication and plating processes.

Enflo Corporation began operations on-site in 1976. Enflo Corporation manufactures teflon products; the manufacturing processes include compression molding, machining, cutting, and parts washing both by hand and machine. Chemicals used for washing the teflon parts include tetrachloroethylene and 1,1,1-trichloroethane; approximately 27.5 gallons of solvents are used annually. Machines used at the facility generate waste hydraulic oils at a quantity estimated at 27.5 gallons a year. The solvents and oils are stored in 55-gallon drums within the building at the southwest end of the manufacturing plant. Enflo Corporation employs one part-time and four full-time workers involved in the manufacturing processes.

Several potential source areas are identified on the property. A cesspool, located approximately 20 feet north of the southeast corner of the building, receives wastewater generated by manufacturing processes. Three areas of discolored and cemented soil, possibly due to surface dumping of wastes, is located south of the southern parking lot. The reddish-brown to silvery-grey soil covers a total area of approximately 200 square feet. A hazardous materials storage area, containing of nine 55-gallon drums, is located in the southwest part of the building. The drums are used to store virgin hydraulic oil and virgin tetrachloroethylene, and waste hydraulic oil.

A 2,000-gallon fiberglass underground storage tank (UST), used to store fuel oil, is located west of the building. During the Roy F. Weston, Inc. Alternative Remedial Contract Strategy (WESTON/ARCS) on-site reconnaissance, an unknown UST was identified near the southeast corner of the building, based on the presence of fill and vent pipes. The volume and contents of the tank could not be determined. According to Enflo Corporation personnel, the tank has not been used since at least 1976.

Groundwater in the area has a Connecticut Water Quality Classification of GB/GB/GC. The immediate area is serviced by public water and sewers. Although most of Bristol is served by public water, three nearby residences, 0.3 miles from the property, rely on private wells. There are 14 public water supply sources within a four-mile radius of the property. The nearest public well to the property is maintained by Briarwood College which is located approximately [redacted] of Comerford Mfg. Co. and serves an estimated 450 people. Public and private groundwater supplies within four miles of the property serve an estimated 108,734 people.

Surface water runoff from the sources on the property flows overland south to southeasterly to a wetland located approximately 0.34 miles of the property. The wetland drains to a pond which is the headwaters of an unnamed stream, which discharges to the Eight Mile River southeast of the property. The end of the 15-mile downstream surface water drainage route is on the Quinnipiac River, in South Meriden, Connecticut.

The Eight Mile and Quinnipiac rivers are classified as C/B along their length within 15 downstream miles of the property. Class C/B is used to describe fresh water resources with known quality problems. These waters can have existing uses that include recreational activities, fish and wildlife habitat, agricultural and industrial supply and other legitimate uses including navigation. No drinking water intakes are identified within 15 downstream miles of the property.

The Quinnipiac River and intermittent segments of the Eight Mile River are considered major trout streams by the Connecticut Department of Environmental Protection (CT DEP), Division of Inland Fisheries. The Eight Mile River is stocked with trout between Grannis Pond and Prospect Street in Southington, Connecticut. It is likely that stocked and native trout are also fished for in the tributary streams to the Eight Mile River. An estimated 10.11 miles of wetland frontage occur along the 15 downstream miles of the property.

The nearest residence to the property, 316 Lake Avenue, is located approximately 250 feet west of the property. There are no schools or day-care facilities located within 200 feet of an area of observed contamination on the property. An estimated 85,888 people live within four radial miles of the property and 15 people are known to work on-site. There are no terrestrial sensitive environments located on the property.

COMERFORD MFG. CO.
REFERENCES

[1] CT DEP. (Connecticut Department of Environmental Protection). 1989. Preliminary Assessment Report, Comerford Mfg. Co. Prepared for the U.S. Environmental Protection Agency by the CT DEP Hazardous Materials Management Unit. October 19.

[2] Schmidl, Joseph (WESTON/ARCS). 1994. Project Note: Latitude/Longitude Calculations. August 26. TDD No. 9304-08-AWS.

[3] WESTON/ARCS. 1994. Logbook for Field Activities for Comerford Mfg. Co.. TDD No. 9304-08-AWS.

[4] Town of Bristol. 1994. Bristol, Connecticut Assessors Map Number 4, 1990.

[5] CT DEP. (Connecticut Department of Environmental Protection). 1982. Hazardous Waste Inspection Checklist. Prepared for the U.S. Environmental Agency by the CT Department of Environmental Protection. July 14.

[6] USDA. (U.S. Department of Agriculture). 1960. Soil Survey of Hartford County, Connecticut, Soil Conservation Service.

[7] Schmidl, Joseph (WESTON/ARCS). 1994. Phone Conversation Record with Mr. Jeff Schultz (New England Regional Climactic Data Center), RE: Parsons, Robert E. Inc., Background Information. November 10. TDD No. 9304-18-AWS.

[8] USGS. (U.S. Geological Survey). 1992. Surficial Materials Map of Connecticut, by J. Radway Stone, J.P. Schafer, E. Haley London, and W. B. Thompson, U.S. Geological Survey.

[9] Bedrock Geological Map of Connecticut. Connecticut Department of Environmental Protection and U.S. Geological Survey, edited by Hugo F. Thomas (Connecticut State Geologist). 1985

[10] USGS. (U.S. Geological Survey). 1966. Bristol, Connecticut Quadrangle. 7.5-minute Series (Topographic). Photorevised 1984.

[11] USGS. (U.S. Geological Survey). 1966. New Britain, Connecticut Quadrangle. 7.5-minute Series (Topographic). Photorevised 1992.

[12] USGS. (U.S. Geological Survey). 1967. Meriden, Connecticut Quadrangle. 7.5-minute Series (Topographic). Photorevised 1984.

[13] USGS. (U.S. Geological Survey). 1968. Southington, Connecticut Quadrangle. 7.5-minute Series (Topographic). Photorevised 1992.

COMERFORD MFG. CO.
REFERENCES
(continued)

[14] 1990 Census of Population and Housing, Summary of Population and Housing Characteristics, Connecticut. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Report 1990 CPH-1-8. July 1991.

[15] Frost Associates. 1994. Project Note, RE: Comerford Mfg. Co., Population and Private Well Users. September 12.

[16] Atlas of the Public Water Supply Sources & Drainage Basins of Connecticut, by the State of Connecticut, Department of Environmental Protection, Natural Resources Center, D.E.P. Bulletin No. 4. June 1982.

[17] Database of Community Water Supplies in Connecticut, Population Range 1 to 999,999. 1994. Connecticut Department of Health Services, Water Supplies Section. Printout dated August 26.

[18] Goujiamanis, Taso (WESTON/ARCS). 1994. Phone Conversation Record with Mr. John Wogtusnik (Bristol Filtration Plant), RE: Comerford Mfg. Co., Background Information. October 7. TDD No. 9304-08-AWS.

[19] Goujiamanis, Taso (WESTON/ARCS). 1994. Phone Conversation Record with Mr. John A. McManus (New Britain Water Department), RE: Comerford Mfg. Co., Background Information. October 7. TDD No. 9304-08-AWS.

[20] Noto, Ellen (WESTON/ARCS). 1994. Phone Conversation Record with Mr. Paul Dugo (Ciccio Court), RE: Comerford Mfg. Co., Background Information. September 8. TDD No. 9304-08-AWS.

[21] Noto, Ellen (WESTON/ARCS). 1994. Phone Conversation Record with Mr. Bill Karis (Apple Valley Village), RE: Comerford Mfg. Co., Background Information. September 9. TDD No. 9304-08-AWS.

[22] Goujiamanis, Taso (WESTON/ARCS). 1994. Phone Conversation Record with Ms. Terri for Mr. Andy Burke (Environmental Monitoring Labs (EML)), RE: Comerford Mfg. Co., Background Information. September 29. TDD No. 9304-08-AWS.

[23] Noto, Ellen (WESTON/ARCS). 1994. Phone Conversation Record with Mrs. Beliveau (Briarwood College), RE: Comerford Mfg. Co., Background Information. August 26. TDD No. 9304-08-AWS.

COMERFORD MFG. CO.
REFERENCES
(continued)

[24] Noto, Ellen (WESTON/ARCS). 1994. Phone Conversation Record with Mr. Don Vaughan (Plainville Water Company), RE: Farmington Landfill II, Background Information. September 6. TDD No. 9304-17-AWS.

[25] Noto, Ellen (WESTON/ARCS). 1994. Phone Conversation Record with Mr. Steve Aiudi (Cope Manor), RE: Farmington Landfill II, Background Information. September 6. TDD No. 9304-17-AWS.

[26] Goujiamanis, Taso (WESTON/ARCS), Project Note: Groundwater Calculations for Comerford Mfg. Co. Draft Site Inspection. October 13, 1994. TDD No. 9304-08-AWS.

[27] USDOIFWS. (United States Department of the Interior, Fish and Wildlife Service). National Wetlands Inventory Map, Bristol, Connecticut Quadrangle.

[28] USDOIFWS. (United States Department of the Interior, Fish and Wildlife Service). National Wetlands Inventory Map, Southington, Connecticut Quadrangle.

[29] USDOIFWS. (United States Department of the Interior, Fish and Wildlife Service). National Wetlands Inventory Map, Meriden, Connecticut Quadrangle.

[30] USDOIFWS. (United States Department of the Interior, Fish and Wildlife Service). National Wetlands Inventory Map, Wallingford, Connecticut Quadrangle.

[31] Goujiamanis, Taso (WESTON/ARCS), Project Note: Wetlands Calculations for Comerford Mfg. Co. Draft Site Inspection. November 2, 1994. TDD No. 9304-08-AWS.

[32] Water Resources Data, Connecticut, Water Year 1992, by Cervione, Jr., M.A., Davies 3rd, B.S., Bohr, J.R. and Hunter B.W. 1993. U.S. Geological Survey Water-data Report CT-92-1. March.

[33] Water Quality Standards, Connecticut Department of Environmental Protection, Water Management Bureau. 1992. Adopted January, effective May 15.

[34] Kingsbury, Stacey (Environmental Analyst, Connecticut Department of Environmental Protection, Natural Resources Center). 1994. Letter to Mr. Joseph Schmidl, RE: Ansonia Landfill, Ansonia, Connecticut; Comerford Mfg. Co., Bristol, Connecticut. August 26.

[35] EPA. (Environmental Protection Agency). 1994. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database, U.S. Environmental Protection Agency, Region I. Printout dated July 21.

COMERFORD MFG. CO.
REFERENCES
(concluded)

[36] EPA. 1993. Resource Conservation and Recovery Information System (RCRIS) database of Treatment, Storage and Disposal Facilities and Large Quantity Generators; U.S. Environmental Protection Agency, Region I. Printout dated November 22.

[37] EPA. (United States Environmental Protection Agency). 1990. Hazard Ranking System, 40 CFR Part 300, Appendix A, 55 FR 51583. December 14.

[38] Schmidl, Joseph (WESTON/ARCS). 1995. Phone Conversation Record with Mr. Derek Hasse (Alco Industries), RE: Acme Rivet, January 19. TDD No. 9304-08-AWS.

[39] Schmidl, Joseph (WESTON/ARCS). 1995. Phone Conversation Record with Ms. Marguerite Smith (Connecticut Department of Environmental Protection, Division of Inland Fisheries), RE: Quinnipiac/Eightmile River Fisheries, January 19. TDD No. 9304-08-AWS.

[40] Schmidl, Joseph (WESTON/ARCS). 1995. Phone Conversation Record with Mr. Art Mercuri (Unionville Water Company), RE: Water Supply Sources. January 6. TDD No. 9104-17-AWS.

[41] Unionville Water Company. 1993. The Unionville Water Company, Monthly Production (Gallons), January-December 1993. Undated.